

ABSTRACT

In a WAG flood oil is displaced from a subterranean formation by injecting water alternately with gas into a single injection completion per pattern. The ratio of water to gas injected is the WAG ratio. In this invention, two separate injection completions are used in each pattern, with one placed directly above the other. A very low WAG ratio is used for injection into the bottom extremity of the formation. A very high WAG ratio is injected into the upper interval, at as high a rate as can safely be used without fracturing the formation. In the preferred embodiment, two horizontal well bores serve as the two completion intervals. Proper design of this method gives a vertical sweep efficiency of the gas that is several-fold greater than the best of previous WAG flood designs, especially in thin formations.